

XXXIII.—On the Genera *Manouria* and *Scapia*.

By Dr. J. E. GRAY, F.R.S. &c.

DR. ANDERSON, in the just published part of the 'Proceedings of the Zoological Society' for 1872, has written a paper to prove that *Testudo Phayrei*, the type of the genus *Scapia*, and *Testudo emys*, the type of the genus *Manouria*, are only varieties or sexes of the same species, and has illustrated it with eight figures of the sternum of different specimens (pp. 134 to 137)—five belonging to *Scapia*, and the other three to *Manouria*. There is a slight modification in the form of the pectoral plates in the different specimens; but I do not think that, either in the plates or text, he proves the identity of the two genera, which doubtless are allied, and which, in the 'Supplement to the Catalogue of Shield Reptiles,' I have placed together in the same group of land-tortoises. And I do not think that he has proved his case, as it would be very unlike all that was previously known of the form of the pectoral shields in Tortoises.

Because the three specimens of *Manouria* which Dr. Anderson examined have the sternum concave, and his five specimens of *Testudo Phayrei* have it flat, he concluded that the former were the male and the latter the female of the same species, which he calls *Testudo emys*; and he gives a number of names as its synonyms, without defining which of them belong to the male and which to the female. I think if he had done so he would have avoided that mistake.

1. *Testudo emys*, described by Müller and Schlegel in Verhand. Nat. Gesch. Nederl. Ind. Rept. 1839, xliv. pp. 30, 34, tab. 4, the type of the species of *Manouria*, has a flat sternum, and is, according to Dr. Anderson's theory, a female.

2. The specimens in the British Museum, which are described and figured under the name of *Manouria fusea* (Shield Rept. p. 16. pl. 3), being the types of that species, also the specimen said to have come from Australia with the animal figured in the Proc. Zool. Soc. 1860, p. 395, t. 31. have a flat sternum, and are, for the same reason, females according to Dr. Anderson.

3. Leconte, who describes the species under the name of *Teleopus luxatus* (Philad. Proc. 1854, p. 187), does not mention the form of the sternum, which, I think, he most likely would have done if it had been concave.

I think we may therefore conclude that the two sexes of *Manouria* are known, that the specimens described by Schlegel, myself, and Leconte were females, and that those examined and figured by Dr. Anderson were males, according to his theory, and therefore both sexes of this genus are known.

Unfortunately I do not know of any specimens of *Testudo Phayrei* (the type of *Scapia*) being in Europe, and I have never had the opportunity of examining any; but as it appears that all the specimens that have been examined have a flat sternum, probably this species has the sternum flat in both sexes, as is the case in many land-tortoises, and the concavity of the sternum in males of *Manouria* would be a peculiarity of that genus.

Until the skull on which *Scapia* was founded was determined to be the skull of *Testudo Phayrei*, it was not known that the animal was so like that of *Manouria*; but since that time the two genera have been arranged in a special section (see Appendix to Catal. Shield Reptiles, 1872, p. 7). The animals of both resemble that of *Testudo sulcata* of Africa in form and in the scales on the legs and thighs; but that has only a single caudal plate and a shorter head.

XXXIV.—On *Trionyx gangeticus*, Cuvier, *Trionyx hurum*, B.H. and Dr. Gray. By Dr. ANDERSON, Calcutta.

DR. GRAY'S characteristic reply* to my strictures† on his understanding of the two species of Gangetic mud-tortoises seems to indicate that his present knowledge of these species, instead of being an advance on his 'Synopsis Reptilium,' is a relapse into confusion and unreliability. It is not surprising, therefore, that Dr. Gray and his friend conjointly were unable to follow the drift of my remarks. But, although I may not carry conviction to Dr. Gray's mind, I hope to be able, in the following observations, to prove satisfactorily to unprejudiced minds that the skull figured by Cuvier under the name of *Trionyx gangeticus*, and referred by Dr. Gray to the *Trionyx hurum*‡ of Buchanan Hamilton, described at p. 47 in the 'Synopsis Reptilium,' redescribed in the 'Catalogue of Shield Reptiles,' p. 66, under the name of *Trionyx gangeticus*, Cuvier, and again brought forward under the same name at

* Ann. & Mag. Nat. Hist. ser. 4. no. 54, p. 473. † *Ibid.* no. 53, p. 382.

‡ Dr. Gray, in his 'Synopsis Reptilium,' under the name of *T. hurum*, announces the brilliant discovery that "Cuvier's specimen appears to have a peculiarity, in the web between the second and third fingers of each foot being pierced with a hole;" and he further observes that these remarkable solutions of continuity "are not noticed in any of Dr. Hamilton's or General Hardwicke's figures from living animals." These holes, which evidently suggest to Dr. Gray's mind a wide and interesting field for further research, are made by the fishermen, who pass a cord through them and tie the feet together to prevent the animals escaping!